

AMENDMENTS TO THE CLAIMS

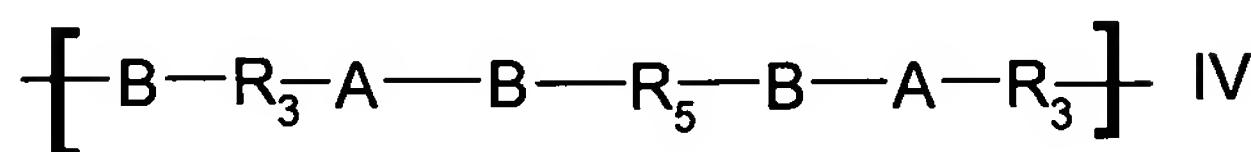
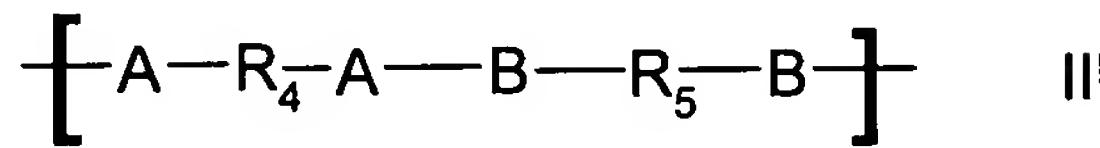
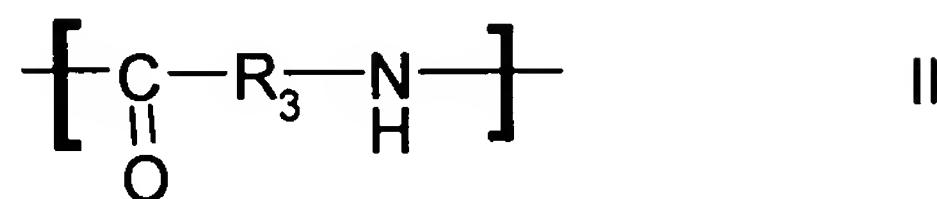
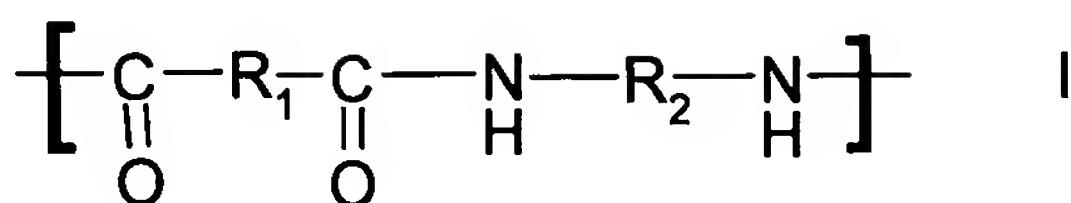
This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-15 (Canceled)

16. (New) A process for the manufacture of nonwoven surfaces by direct melt spinning of filaments of a composition based on thermoplastic polymers comprising the steps of:

- a) feeding the composition to a plurality of spinnerets each comprising several spinning orifices,
- b) feeding the filaments to a pneumatic attenuation device and a stage in which the filaments obtained are formed into a sheet, wherein the composition based on thermoplastic polymers comprises a polymeric matrix and/or a modifying polymeric additive comprising repeat units corresponding to the following general formulae:



in which:

R_1 , R_2 , R_3 and R_4 , which are identical or different, represent aliphatic, cycloaliphatic or aromatic hydrocarbon chains comprising from 2 to 18 carbon atoms,

R_5 represents a polyether radical with a molecular weight of between 400 and 200 000,

A and B represent the CO , NH or O groups; when A represents CO , B represents NH or O and vice versa,

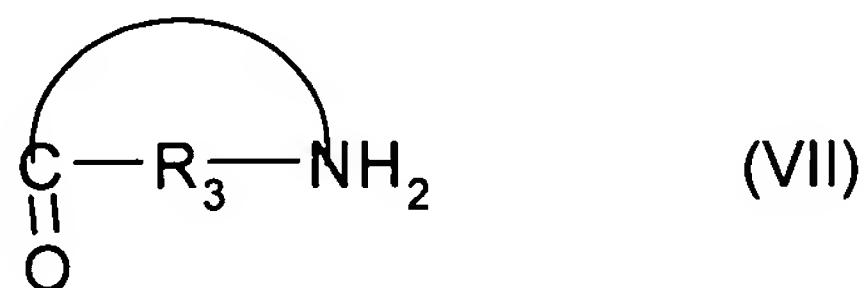
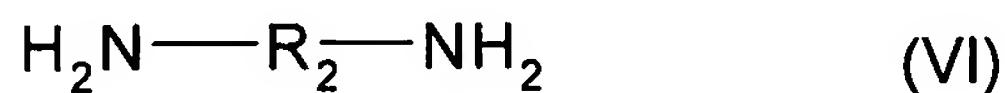
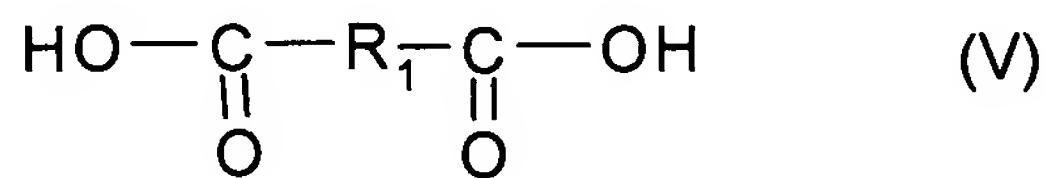
With the further proviso that the polymeric matrix comprises at least one of the repeat units I or II and at least one of the repeat units III or IV when the additive is absent or does not comprise repeat units of formulae III or IV.

17. (New) The process according to Claim 16, wherein the modifying polymeric additive is present in the composition at a concentration by weight of between 1% and

30% of the total composition.

18. (New) The process according to Claim 17, wherein the modifying polymeric additive is present in the composition at a concentration by weight of between 1% and 15% of the total composition.

19. (New) The process according to Claim 16, wherein the modifying polymeric additive is obtained by polymerization of the monomers of following formulae:



in which:

R₁, R₂ and R₃, which are identical or different, represent aliphatic, cycloaliphatic or aromatic hydrocarbon chains comprising from 2 to 18 carbon atoms,

R₅ represents a polyether radical with a molecular weight of between 400 and 200 000,

B represents the COOH, NH₂ or OH functional groups,

in the presence of a monofunctional chain-limiting compound.

20. (New) The process according to Claim 19, wherein the chain-limiting agent is

chosen from the group consisting of monofunctional acids and monofunctional amines.

21. (New) The process according to Claim 20, wherein the monofunctional compounds is acetic acid, propionic acid or benzylamine.
22. (New) The process according to Claim 19, wherein the monomer of formula VIII is present at a concentration by weight of between 1% and 20% in the mixture of monomers of formulae V and/or VI and/or VII and of monomers VIII.
23. (New) The process according to Claim 16, wherein the modifying polymeric additive is composed of:
 - at least one thermoplastic block and
 - at least one polyoxyalkylene block.
24. (New) The process according to Claim 16, wherein the modifying polymeric additive comprises:
 - at least one thermoplastic polymer block formed by:
 - a star or H macromolecular chain comprising at least one polyfunctional core and at least one branch or one segment of thermoplastic polymer connected to the core, the core comprising at least three identical reactive functional groups, and/or
 - a linear macromolecular chain comprising a difunctional core and at least one segment of thermoplastic polymer connected to the core, and
 - at least one polyoxyalkylene block connected to at least a portion of the reactive ends of the thermoplastic polymer block.

25. (New) The process according to Claim 24, wherein the bonding between the thermoplastic polymer blocks are:

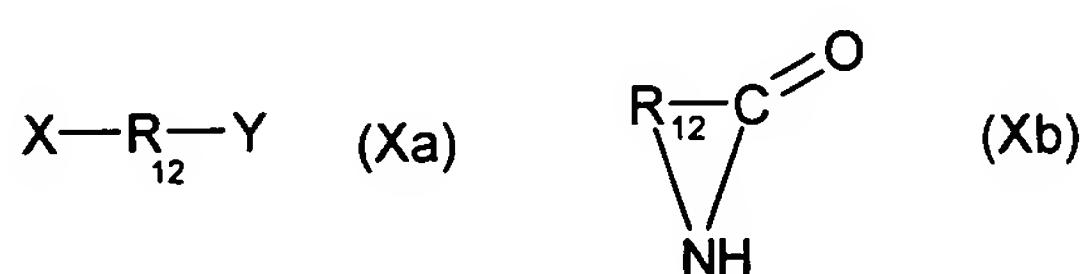
at least one free end of the star or H macromolecular chain, chosen from the thermoplastic polymer branch or segment ends and the ends of the polyfunctional core, is connected to a poly(alkylene oxide) block,

and/or

at least one free end of the linear macromolecular chain, chosen from the thermoplastic polymer segment ends and the ends of the difunctional core, is connected to a poly(alkylene oxide) block; the two free ends of the linear macromolecular chain being connected to poly(alkylene oxide) blocks when the thermoplastic polymer block comprises macromolecular chains solely of linear type.

26. (New) The process according to Claim 25, wherein the star macromolecular chain is a star polyamide obtained by copolymerization from a mixture of monomers comprising:
a polyfunctional compound comprising at least three identical reactive functional groups being an amine functional group or a carboxylic acid functional group,

monomers of following general formulae (Xa) and/or (Xb):



optionally, monomers of following general formula (IX):



in which:

Z represents a functional group identical to the reactive functional groups of the polyfunctional compound,

R₁₂ and R₆ represent identical or different, substituted or unsubstituted, aliphatic, cycloaliphatic or aromatic hydrocarbon radicals which have from 2 to 20 carbon atoms and optionally having heteroatoms,

Y is a primary amine functional group when X represents a carboxylic acid functional group, or

Y is a carboxylic acid functional group when X represents a primary amine functional group.

27. (New) The process according to Claim 16, wherein the concentration by weight of repeat units of formula III and/or IV, when the polymeric matrix comprises them, is between 0.5 and 5% by weight of the said matrix.
28. (New) The process according to Claim 16, wherein the repeat units of formula III and/or IV originate from the reaction between a polyoxyalkylene monomer comprising two reactive terminal functional groups with a diacid monomer or a lactam.
29. (New) The process according to Claim 16, wherein the repeat unit of formula I is obtained by reaction between a diacid selected from the group consisting of

succinic acid, adipic acid, terephthalic acid, isophthalic acid, dodecanedioic acid and their mixtures and a diamine selected from the group consisting of hexamethylenediamine, 2-methylpentamethylenediamine and meta-xylylenediamine.

30. (New) The process according to Claim 16, wherein the repeat unit of formula II is obtained by polycondensation of lactams or amino acids selected from the group consisting of caprolactam, aminoundecanoic acid and aminododecanoic acid.